AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-16. **(Cancelled)**

17. **(Currently Amended)** A receiver circuit, comprising:

an optical reception device; and

an amplifier connected to said reception device;

said amplifier having a gain; [[and]]

said amplifier including at least one control terminal that receives a control signal for setting said gain of said amplifier between at least two gain values in a continuously variable manner, wherein at least one gain value between the at least two gain values is optimized for maximum sensitivity; and

a control circuit external to the amplifier having a first terminal that provides the control signal to the control terminal, at least a second terminal coupled to an output terminal of the amplifier, and a third terminal via which a user-end control signal can be fed into the control circuit.

18. **(Previously Presented)** The receiver circuit according to claim 17, wherein said amplifier is a transimpedance amplifier.

19. **(Previously Presented)** The receiver circuit according to claim 17, wherein said amplifier has a feedback impedance for influencing said gain of said amplifier.

20. **(Previously Presented)** The receiver circuit according to claim 19, wherein said feedback impedance has an impedance value that is set by a signal at said control terminal.

21. **(Previously Presented)** The receiver circuit according to claim 20, wherein said feedback impedance has a resistance value that is set by a signal at said control terminal.

22. **(Previously Presented)** The receiver circuit according to claim 20, wherein:

said feedback impedance is formed by an impedance network with at least one switching device that is switched by said signal at said control terminal; and

said switching device alters said impedance of said feedback impedance when said switching device is switched.

23. **(Previously Presented)** The receiver circuit according to claim 22, wherein said switching device is formed by a switching transistor.

24. **(Previously Presented)** The receiver circuit according to claim 23, wherein said switching transistor is a MOS-FET transistor or a bipolar transistor.

25. **(Previously Presented)** The receiver circuit according to claim 19, wherein:

said feedback impedance is formed by an impedance network with at least one variable impedance that can be set at least approximately linearly within a predetermined impedance range by a signal at said control terminal.

26. **(Previously Presented)** The receiver circuit according to claim 25, wherein said variable impedance is formed by a transistor.

27. **(Previously Presented)** The receiver circuit according to claim 26, wherein said variable impedance is formed by a MOS-FET transistor or a bipolar transistor.

28. **(Previously Presented)** The receiver circuit according to claim 17, wherein said reception device is a photodiode and further comprising a duty cycle control to prevent pulse distortions by feeding a current into the amplifier.

29. **(Previously Presented)** The receiver circuit according to claim 17, further comprising:

a package for packaging said optical reception device and said amplifier;

said package being a TO-46 package, a TSSOP10 package, or a VQFN20 package.

30. **(Previously Presented)** The receiver circuit according to claim 29, wherein said package has a terminal pin forming said control terminal.

31. **(Currently Amended)** A method for operating an optical receiver circuit, comprising:

prescribing a gain value for an amplifier of the optical receiver circuit in dependence on a bandwidth prescribed for the optical receiver circuit;

determining the gain value in accordance with an equation:

$V = K / B$,

K specifying a maximum achievable bandwidth-gain product previously determined for the optical receiver circuit and B denoting the bandwidth prescribed for the optical receiver circuit;

setting the gain value of the amplifier at a control terminal of the amplifier by selecting an impedance of an impedance network, wherein the impedance of the impedance network includes at least one variable impedance such that the impedance can be variably set ~~at least by varying the resistance of a transistor of the impedance network according to a gate voltage applied to the transistor~~; and

after setting the gain value of the amplifier, using the amplifier to amplify an output signal of an optical reception device, wherein the impedance network comprises:

a plurality of switching transistors;

a plurality of resistors connected in parallel;

a plurality of capacitors connected in parallel with the plurality of resistors; and

a transistor that functions as a linearly controllable resistor according to a gate voltage such that the impedance of the impedance network is continuously variable.

32. **(Cancelled)**

33. **(Previously Presented)** A receiver circuit, comprising:

an optical reception device;

an amplifier connected to said reception device, said amplifier having a gain;

an impedance network connected to the amplifier, the impedance network having an impedance configured to be set in a continuously variable manner within a predetermined impedance range between at least two gain values according to a control signal; ~~and~~

a duty cycle control that prevents pulse distortions by feeding a current into the amplifier;

a coding device that recodes the control signal such that the impedance network forms the desired impedance;

wherein the impedance network comprises:

a plurality of switching transistors;

a plurality of resistors connected in parallel;

a plurality of capacitors connected in parallel with the plurality of resistors; and

a transistor that functions as a linearly controllable resistor according to a gate voltage such that the impedance of the impedance network is continuously variable;

wherein the plurality of switching transistors are controlled by the recoded control signal such to create an impedance that is generated by (i) resistors and capacitors selected from the plurality of resistors and the plurality of capacitors and (ii) by a resistance of the transistor.

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34. **(Previously Presented)** The receiver circuit according to claim 17, wherein the at least two gain values are selected to be individually adapted to transmission rates selected from the group of 1 Gbps, 2 Gbps, and 4 Gbps.

35. **(Previously Presented)** The receiver circuit according to claim 17, wherein sensitivity is an optical sensitivity.

36. **(Cancelled)**

37. **(Cancelled)**

38. **(Previously Presented)** The receiver circuit according to claim 17, further comprising a coding device that recodes the control signal to set the impedance.

39. **(Cancelled)**

40. **(Previously Presented)** The receiver circuit according to claim 17, further comprising a duty cycle control that prevents pulse distortions by feeding a current into the amplifier.

41. **(New)** The receiver circuit according to claim 17, further comprising at least one differential amplifier having a first terminal coupled to an output terminal of the amplifier and at least a second terminal coupled to the second terminal of the control circuit.